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ABSTRACT

This paper examines the use of mentoring to help increase the number of women and minorities in tenured faculty and administrative positions in higher education, and describes a model mentoring program undertaken at Louisiana State University (LSU). It reviews research on diversity within academia and reports on interviews conducted with administrators and faculty to gauge their opinions about diversity and mentoring in higher education. It also discusses roadblocks to mentoring and the perceived lack of women mentors by some junior women faculty. The paper then describes the Knowledge Engineering for Young Scholars (KEYS) summer program conducted at LSU, which brings talented female and minority high school students to campus to work with science and engineering faculty on various research activities. (Contains 59 references.) (MDM)

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MENTORING TO BUILD DIVERSITY IN THE UNIVERSITY COMMUNITY

Introduction

The continuing under representation of women and minorities in tenured faculty and administrative positions in higher education is well documented by many researchers and governmental organizations (Johnsrud, 1993). Sponsorship, or mentoring, is seen as vital to a successful faculty career (Corcoran & Clark, 1984; Blackwell, 1989), and especially important to the persistence and academic career advancement of minorities and women (Moore, 1982; Boice, 1993), as well as to the diversity and strengthening of community within the university (Carnegie Foundation, 1990; Project Kaleidoscope, 1991; Bronstein, 1993). Although mentoring is frequently identified as necessary to the recruitment and retention of women and minorities in academia (Bronstein, et al, 1993), the concept of 'mentor' and the process of mentoring have been unclear, and this lack of clarity has created uncertainty and difficulty in accomplishing diversity within the academic community. Further, some concepts of role modeling and mentoring are ill-suited to the conditions of the contemporary university and fail as elements in community building. New ways of conceptualizing mentoring are required if under represented populations are to achieve in their academic careers.

The University

In higher education, an insufficient representation of women and minorities in tenured faculty and administrative positions persists (Gainen, 1993), despite growing recognition of the problem, and efforts to advance diversity. University faculty in the U.S. are predominantly white and male (Ballantine, 1989). Women held less than 25% of the full-time tenured faculty positions in the U.S. in 1992 (National Research Council). Although women became a majority of college students in 1979 for the first time in U.S. history, as recently as 1985 tenured women were only 9.3% of the total faculty at public Ph.D. granting universities (Touchton, 1991). Women and

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minorities are concentrated in instructor, lecturer, and adjunct faculty positions, while white men are more likely to hold tenured associate and full professor positions (Johnsrud, 1993). Thus, the senior faculty and administrators who make tenure recommendations and decisions for women and minorities are still predominantly white males (Yentsch & Sindermann, 1992). According to one study (Alpert, 1989), if the rate of progress since 1975 continues, it could take women faculty another 90 years to reach parity in U.S. doctoral universities. Except for Asian-Americans (Johnsrud, 1993), the statistics for minority faculty are even more grim (Brown, 1988).

Why should the academy care about this problem? Higher education has guarantees in place to assure equal access for women and minority students, and it is widely believed that equal access is a sufficient remedy. Our universities have been recognized worldwide, and U.S. graduate schools are preferred by many foreign countries and their students, who come to the U.S. for training. Why change the traditional make-up of the system if it has worked so well in the past?

One important reason for change is economic. The context in which higher education finds itself has been rapidly changing (Kerr, 1982; Ballantine, 1989; Carnegie Commission, 1984). Funding is fiercely competitive, and static or declining, while operating costs have continued to increase. University presidents are hired for their fund-raising abilities as much as for their academic leadership. Legislative bodies, under pressure from constituents to reduce costs, are demanding increased accountability from the educational institutions they fund. There have been claims that the U.S. is spending too little on primary and secondary education and too much on higher education, thus "over-educating" workers (Rumberger, 1981). The public expects higher education to be efficient and more economical, to provide the same or better education, research, and service, with less funding. These are new challenges which require more creative problem solving capabilities.

Amidst these economic challenges are the on-going internal and external calls for diversity within the academic community. Though higher education institutions have individually and collectively pledged themselves to the concept, guaranteed equal access has not accomplished the desired transformation of academia into a diverse community of scholars. Voices have been raised within academia to challenge white male dominated western science (Harding, 1993; Rosser, 1990; McIntosh, 1984). Higher education continues to be portrayed as an ivory tower where, except for tokens, women and minorities are stuck closer to the moat than the pinnacle. In defense, some academic institutions counter that the ability to implement affirmative action is compromised during periods of down-sizing. With so many more urgent demands and stresses on higher education, faculty diversity and community building are postponed as back burner issues. Why attempt to diversify the academic community during a period when higher education is experiencing increased scrutiny and reduced funding? What real advantage is there to the university, to women and minorities, or to the existing academic community?

For universities, there is a crucial need to find more creative solutions for the myriad of problems faced by higher education and society. According to Campbell (1994), research conducted at the Western Ontario School of Business Administration found that teams composed

of culturally diverse people are better at finding more creative solutions to problems, and diverse groups make higher quality decisions than homogeneous groups. For higher education to develop a culturally diverse community capable of working together to find creative solutions and make higher quality decisions requires that women and minorities participate more fully in the academic community at every decision-making level. This has not been happening, and the slowness with which all but a few female and minority individuals have moved up through the academic ranks may be more than coincidental to the difficulty with which higher education is finding creative new ways to respond to the present context of challenge and change.

For women and minorities, working in leadership situations in higher education can provide the opportunity and platform for addressing important social issues, presenting different perspectives, and challenging stereotypes. This "service" component of the teaching, research, and service mission of higher education is community building. Women and minorities report that they especially value teaching and service opportunities (Boice, 1993; Menges & Exum, 1983). Service and personal growth possibilities can be attractive inducements for recruiting women and minorities to academia. However, there is no incentive to the individual nor economy to the institution if academic diversity efforts begin and end with equal access. Diversity that works for the individual, the institution, and the community requires that there also be career advancement of women and minorities in tenured faculty and administrative positions. The need to increase female and minority participation in higher education administration in order to counter negative stereotyping and devaluation has empirical support (Spangler, et al, 1978; Pugh & Wahrman, 1983; Martin, 1985). As women and minorities continue to make up ever larger proportions of our student bodies, the need to counter negative stereotypes and devaluation becomes more critical.

Too frequently, institutional resources and faculty time and energy are placed solely in the search and recruitment process, with relatively little or no effort placed in the development and retention of newly hired faculty (Johnsrud, 1993). The standard academic operating procedure has been that new faculty "sink or swim" on their own after being hired (Shęperd, 1993). When a new faculty member is not retained and tenured, then that individual, the faculty, the department, and the institution suffer real economic loss. Much could be saved, and much contributed to the cause of diversity and community, if more were done to retain new faculty so the same scarce resources did not have to be repeatedly used to pay for search committees, recruiting, travel, interviewing, moving, and new faculty research start-up expenses. In science or engineering for example, the advertising and travel for interviewing 2-3 candidates for a vacancy, and the cost for laboratory supplies for a new faculty member, can easily run as high as $60-250,000 per vacancy, over and above the salary of the individual who is hired (Richards, 1994). In addition, there is the tremendous cost of faculty and administrative time to recruit, serve on search committees, and interview applicants. "Because this is the way it has always been done" is not sufficient justification for continuing practices which have not contributed to diversity and have caused such large costs in terms of human and financial resources. There are economies which can be realized if "talent development" replaces "talent sifting" (Project Kaleidoscope, 1991, p. 64). With more attention to the retention of women and minority faculty,

scarce resources could be saved and reallocated to reduce the financial pressures of others within the academic community.

Diversity

As pointed out by Sleeter (1993), "women and minorities" is the phrase commonly used to describe diversity for the purposes of university policy determination. However, it is white middle-class women who have dominated and benefited most from the (mis)interpretation of this phrase in practice:

> This phrase lumps the majority of the population into what some people regard as a special interest group that then can be treated as an add-on. ...The phrase "women and minorities" ...lumps together everyone who is not a white male, enabling educators to believe they have diversified their hiring...if they acquire a few members of that "category" -even when those they added are mainly white females. At my university, ...some white males congratulate themselves on having added "diversity" to the faculty by hiring white women. The term seems to help them to remain blind to men and women of color. (p. 222)

According to Nicholson (1980), "Many academics believe that the reason there are few women in their departments or their universities has to do with past attitudes towards women that are no longer held by most even mildly enlightened people. Thus the failure of women today to ...satisfy the criteria for tenure must be the responsibility of the individual woman. Affirmative action is understood, within this framework, as a watchguard against the continuation of such past forms of discrimination."(p. 80) The problem with this prevalent viewpoint is that it puts the onus to succeed on women and minority individuals who are still under represented and "out of place" in the traditional white-male-as-norm higher education environment.

This tendency to think discrimination has been eliminated with affirmative action and that the academic environment has been fixed (through equal access) for women and minorities, supports the belief that a "sink-or-swim" standard operating procedure for new faculty is reasonable and fair. Researchers are beginning to study and document the importance of socialization into the culture of academia (Zuckerman, et al, 1991) as being especially critical to the persistence of women and minorities who are seen, and also see themselves, as outsiders to the predominantly white-male-as-norm culture of higher education.

Community

Is community possible in higher education? Ballantine (1989) points out that the university has community-like characteristics such as division of labor, interdependency of participants, agreed upon academic programs. centralized physical location, governance, and services. These characteristics support the community concept. However, Ballantine also identifies

seven levels of hierarchical structure which commonly exist within a typical university, thus giving support to a more bureaucratic model of higher education.

The metaphor of the hierarchical ladder is frequently used to describe higher education. The college presidents and administrators who are mostly white males are on the top step, and women and minorities who are the untenured instructors are mostly on the bottom step. In this metaphor, work and orders are sent down the ladder and communication up is difficult. There is separation and competition, and the constant fear of falling down or off the ladder remains. Only those at the top can see what is really going on within the institution.

Baldridge, et al (1984) report that many scholars have rejected these bureaucratic and hierarchical models of higher education, favoring instead the concept of a community of faculty peers or scholars (Goodman, 1962), who utilize consensus to administer. Critics of this community of scholars model (Weick, 1983) point out that it rarely works above the departmental level in practice and it is, therefore, a goal or ideal, rather than a realistic working model. Since the community of scholars model is considered to be the ideal and is commonly favored over the bureaucratic and hierarchical control models for higher education, it is important to note that research has shown it is women who develop more lateral relationships and resist hierarchical ranking, while men rely more on the authority of their superiors. In addition, men in mixed groups with women tend to develop a more personal and less aggressive interaction style, while men in all male groups tend to compete more with each other (Ortiz, 1988).

In higher education, competition is an everyday part of much of academic life (Cole & Singer, 1991; Hoyte & Collett, 1993; Nicholson, 1980). There is competition for scarce research funding, competition for publication in the journals, competition for teaching awards, leading to competition for tenure. The first women or minority faculty and administrators, if unfamiliar or uncomfortable with competition, may find it difficult to survive without considerable tangible and intangible start-up support and sponsorship, or mentoring. It is common practice in higher education that new faculty (especially women and minorities) are treated "no differently." They succeed or fail based on their ability to compete successfully. There is a policy "to be fair," and to avoid having new faculty resented by the other faculty with whom they must compete. However, the higher education environment is still composed predominantly of white males. Therefore, to support the first women and minorities "no differently," in such a traditionally male environment, is to treat them quite differently.

Women and minority faculty members in higher education report that they <u>are</u> treated differently, and not in a supportive way (Gainen, 1993). The added responsibilities for non-traditional faculty can be quite overwhelming (Dresselhaus, 1984). As a minority, they are frequently asked to serve on more committees (to be the desired or required minority member representative, and provide minority input), to recruit students, to teach special classes, to advise student groups, to serve as a role model and mentor, and to attend and give presentations at public events. If they decline to do these things, they risk being judged as uncooperative or unwilling to contribute to the goals of the department or college. When they allow themselves to be used in this way, they spread themselves thin and jeopardize their own professional

credibility and chances for tenure, which may still be decided with emphasis placed on research and publication. These faculty members are also subject to unrealistic expectations from women, minority students, and other faculty, who expect the few to be able to mentor the many.

The higher education ideal may be a community of scholars, however, what faculty actually experience in their careers is more often like a competitive tournament (Rosenbaum, 1989), where only the winners from each round survive to advance to the next level or rank. When a faculty member is not promoted to a tenured position, that individual must withdraw to another university in order to continue to compete. In the tournament environment, faculty can advise and mentor non-threatening undergraduate students, as that is part of the role of being faculty. However, faculty members may see new faculty and even some graduate students as potential competitors, find them intimidating, and be reluctant to mentor them. If women and minorities receive faculty mentoring or encouragement as undergraduate students, and then this encouragement decreases or stops when they become graduate students and faculty, the resulting contrast may make the environment seem even more inhospitable.

The women and minorities who have survived in higher education are supposedly those who have learned to compete in the tournament just as well or better than their white male faculty colleagues. After learning how to play in the tournament, they may be reluctant to mentor other women and minorities who could bump them from the competition. Resources in higher education are fixed or declining, and any resource made available to a new competitor has to come from the pool available for all. Thus, a pervasive conversation of scarcity contributes to the competitive and unsupportive nature of the environment. Past projections of faculty shortages and retirements (Schuster, 1989) raised hopes for more faculty career opportunities, but new doctorates are competing with many applicants for fewer position openings due to downsizing. White males have been able to compete successfully and survive in the higher education tournament, with and without mentoring, presumably because they have so many white male faculty and administrative role models for inspiration. If there were a comparable critical mass of faculty and administrative role models for women and minorities, then mentoring and encouragement probably would not be necessary for their success either.

Many models are used to represent what the higher education community is, or should be. Some models, such as the community of scholars, are seen as too idealistic, too unrealistic, or unworkable. Other models, like the hierarchical ladder and the tournament, bring to mind competitive games, with more chances for failure than success. This image discourages participation, and thus it seems to contradict the very concept of community. It is important to recognize which models work best in higher education to build trust and encourage cooperation, and which models can threaten trust and cooperation. There are models which can work to build community, and encourage participation by women and minorities, better than those which stress competition. For example, there is a symbiosis model of community which has been derived from biology (Shepherd, 1993). In this model, dissimilar organisms can live and work together successfully, in an association which is beneficial to both. Similarly, the concept of community as a net, or web, provides an image for higher education which is much more supportive of trust and cooperation than the ladder or the tournament.

Belenky, et al (1986) use the metaphor of a net or web to describe the complexity of interrelatedness and interdependence in a community. With this image of education, the faculty member, the student, and the administrator can make contributions to each other or the rest of the community. In a web it is possible to have an impact, and all can see what is happening. Because it is safe, community members can collaborate, construct new understandings, and know each other. In this web, mentoring is symbiotic. Here, the mentor can connect with and learn from the novice, not in a superior and subordinate relationship, but through cooperation and mutual support. People are not cut off, to succeed or fail, in a community that works like Belenky's net. Rather, they are supported, so they can see what is going on and make a contribution. Mentoring works for the benefit of all in Belenky's concept of community. Of the models considered here, it is Belenky's net which works best to build trust, encourage cooperation, and support mentoring to build diversity in the university community.

It has been suggested that the under representation of minorities and women in some disciplines, like engineering, is a function of the male identity of that working environment (McIlwee & Robinson, 1992). What this means is that the environment, by having been all male for so long, has taken on a male identity that makes it unusual and abnormal for women, who enter that environment not looking and acting like a male, or an engineer, has traditionally looked and acted. Due to stereotypes, male (and female) expectations are that women are different and not quite as good (Klein, 1985), and eventually the self confidence, commitment, and performance of these women are undermined by those unspoken expectations. McIlwee & Robinson (1992) found that women advanced more quickly and successfully in engineering careers if they entered new fields of engineering, where there was not a tradition of the occupation being all male. In these new areas, the women were able to perform their jobs with confidence, without being undermined by a male identity and environment for that occupation.

In higher education there are disciplines, like engineering and science, which have strong male identity environments. There are whole institutions, like the more prestigious doctoral granting research universities, which have strong male identity environments. These male identity environments are usually quite proud of their reputations for equal access, academic rigor, and the successful competition of their faculty for research funding and publication. -Only the best and the most competitive faculty get to play in the tournament and make it up the ladder to tenure. It is probable that these higher education environments have chosen and adopted the model of either the hierarchical ladder, or the competitive tournament, or both, without realizing the impact these models have on diversity. As discussed previously, some models work far better than others for building community and diversity. The disciplines and universities which hold fast to the competitive models for their academic community will have more difficulty in attracting and retaining women and minorities than those disciplines and universities which have chosen models to offer more support, fewer stereotypes, and less white-male-as-norm expectations.

In a hierarchical ladder or a tournament model, competitive white male faculty and administrators are the problem, <u>if</u> their competitive game keeps women and minorities from advancing. In a net or web model, white male faculty and administrators are not the problem. The

problem is the under representation of women and minorities in the community. In the net model, white male faculty and administrators become the solution to the problem when they mentor.

Mentoring

In education, we have pretty much accepted the argument that to get more women and minorities into non-traditional positions requires that we have more women and minorities to serve as role models. Byrne (1993) calls this an outdated "blame the victim" approach. This belief in the need for politically correct role models has been a pervasive but unproven theory in society and education. We have used it to procrastinate, and we have also used it to place extraordinary expectations and demands on the few women and minority graduates who have become faculty.

The terms "mentoring" and "role modelling" are frequently used interchangeably and this is somewhat problematic. Byrne's (1993) research on academic women provides some helpful clarification. She found role modelling to be passive and ineffective below the achievement of some critical mass (about 30%) of women in an area. However, mentoring "is an active process of positive sponsorship by older 'patrons' or teachers, managers, trainers, counsellors, more senior women staff, etc. towards younger or less experienced entrants or trainees." (p. 97)

She notes that "sponsorship, grants and the award of jobs are reflections of the power structure." (p. 97) In educational administration, women account for a small percentage of the leadership. "Mentors will, therefore, more often still be male." (p. 98) Byrne's review of research on role modelling found no empirical evidence to support role modelling as effective in advancing females. Rather, what Byrne found was that researchers who have espoused role modelling are actually describing "a series of mentor activities." (p. 99)

For women and minorities to enter and succeed in higher education careers which are seen as non-traditional for them, they need one-on-one advice, encouragement and support. To be effective, this empowering support which we call mentoring must come not from the extraordinarily few women or minority role models who are seen as exceptions, but from those who are in power and have credibility as being normal for that career, -the majority men. Byrne has not accepted widely held but unproven claims regarding the need for role models. She says reliance on role models has not facilitated (and may, in fact, have impeded) female advancement in science careers. Her research challenged widely held assumptions and found that both same and other-sex mentoring, not same-sex role modelling, can advance women in non-traditional careers.

Since men are the majority in higher education, their advice and counsel is seen as coming from an authority, those who are already in power, who have credibility. However, during faculty interviews, Byrne found resistance among male faculty to acknowledge either the existence or the appropriateness of mentorship. One faculty member said it was his job to teach his disciplinary subject matter, not to engage in social engineering. "In analysing [sic] the

interviews, we found that there was widespread agreement from Professors and Deans that active mentorship was not a role which the majority of their staff recognized or saw as their function." (p. 151)

While mentoring is primarily identified as important to building community and enhancing diversity, the contribution of mentoring to the education and professional development of the mentor has largely been neglected. Both the mentored and the mentor can learn through the mentoring experience -to hear the "other" voice, to see aspects of the work and personal world which were not apparent from a distance, to appreciate difference, to cooperate and trust. These community building experiences also contribute to the knowledge, career advancement, and well-being of the mentor.

The white male majority in higher education may actually have an experiential deficiency if they have not participated in mentoring others who are unlike themselves. They may have isolated themselves from learning at the top of the hierarchical ladder, instead of being in community and learning with and from women and minorities. This special form of "illiteracy" is identified by Harding (1993), who says western scientists are accustomed to referring to marginalized people as scientifically illiterate because they haven't had access to the technology required to do science. However, she invites us to consider this differently, and see that it is we who are suffering a deficiency because we do not have the benefit of contributions which could be made to science by marginalized people if we allowed them access to our technology. Higher education is suffering a deficiency because it does not have the benefit of contributions which could be made if women and minority faculty were allowed greater access. It is the white male faculty, and their colleges and universities, who can benefit from the contributions which are possible within the context of a diverse academic community which functions like a web or net to encourage participation and support, rather than a ladder where people are left alone on the bottom rungs and frequently fall off.

Sponsorship Works

Except where references are given, the conversation and story examples used in the remainder of this paper are from research in progress, "Academic Discipline, Mentoring, and the Career Commitment of Women Faculty" (Nye, 1994). Here we define conversation and story as the point(s) each speaker communicated to the researcher through answering questions, by reflecting on the past, describing experiences, sharing thoughts and ideas, etc.

Academic administrator number one, a white woman, was interviewed shortly after she had stepped down from successfully serving for approximately ten years as the provost at a land grant university. Since the administrative position she had held was so exceptional for a woman, she was asked to explain how it had happened that she became a university provost. She reported that her faculty career was traditional, that she had come up through the faculty ranks in her department by teaching, conducting research, and publishing. She had been asked to serve on the search committee for a new chancellor for her university, and she had chaired that committee.

Through her very visible work on that search committee, she became known to the individual who was eventually chosen as chancellor. This chancellor, who was a white male, subsequently encouraged her to apply for the position of provost. She recalled that the new chancellor had been confident she could do the job, and although she was reluctant, "he would not take no for an answer." She thought she had been in the right place, at the right time, with the right credentials, and a man who believed in her abilities (almost more than she did) kept encouraging her until she agreed to accept the position.

Academic administrator number two, also a white woman, was interviewed while currently holding the position of associate provost at the same land grant university. Her routing to an administrative position had been quite different from administrator number one. This woman had been working in continuing education and was looking for promotion opportunities when the dean of an academic division which serves undergraduates encouraged her to apply for the position of associate dean. She said this dean was determined to hire a competent woman as his associate dean. She got the job and was promoted to the dean's job when he retired. From there, she was very visible campus-wide, and she was promoted to the position of associate provost by the woman provost. She also thought she had been in the right place, at the right time, with the right credentials, and was promoted because there was a dean who was committed to promoting women, followed by a provost who was committed to promoting women.

Academic administrator number three is an African-American male, who holds the position of vice provost for research at another land grant university. His career path was from industry, then to academia and through the faculty ranks to acting-dean of his college, and then into central administration to direct sponsored research for his university. He recalled a professor he had as an undergraduate, a white man who kept track of him and asked him how things were going, and who actually went to other faculty and interceded on his behalf if things went badly. This administrator was quite sure he couldn't have made it without that man's taking him "under his wing" the way he had, as it was difficult for him to be the only black man in his classes.

In conversation, these individuals did not use the word "mentor." Their comments included, "he encouraged me," and "he was committed to affirmative action and doing something to make a difference," and "he protected me and took care of me." Although the experiences these administrators described resemble what is referred to as sponsorship or mentoring by a more senior person, their telling about their careers did not include use of the word "mentor." Their non-use of the word may indicate a general confusion or a lack of understanding of the concept of mentoring. This may explain why faculty in Byrne's interviews said that mentoring was not a role the majority recognized or saw as theirs. Perhaps the concept is still too vague, too unclear for most women and minority people to feel comfortable with it, or be able to recognize and associate it with their experience.

Administrator Conversations

Department head number one, a white male, was asked if he had been mentored as an incoming junior faculty member, and if so, what that mentoring had looked like. He responded that when he was newly hired by the university, he identified two obviously successful senior faculty members and then he watched them closely and patterned his own behavior and performance of duties to resemble theirs. When Byrne's (1993) definition of the difference between mentors and role models was discussed with this department head, he said that he had used the two senior faculty as role models, not mentors, and he did not recall having been mentored as a junior faculty member. This lack of distinction and confusion between role models and mentors agrees with what has been reported by Byrne. Department head number one thought the university would be wise to foster mentoring by establishing annual mentoring awards at the college and the departmental level. These awards could include monetary incentives funded by the cost savings from reduced turn-over among junior faculty. Only newly tenured faculty could nominate their mentor(s) for the awards.

A second department head at the same university, also a white male, said he hesitated to even use the word "mentoring," because too much gets classified as mentoring. For him, the typical science professor and graduate student relationship is not mentoring. In these relationships, the professor uses the student to work in the lab and collect data. The professor benefits from the graduate students' work, and that is not mentoring. He said that real mentoring is not done for the self benefit of the mentor, as in a faculty/graduate student laboratory relationship. True mentoring was not to benefit the professor, but to contribute to the community. He noted that new faculty in his department are usually hired in expertise areas which compliment the expertise already available within the department, and not to duplicate it. Therefore, new faculty come into the department as the "experts" in their specific research area and those new faculty usually know more in that specific area than do older faculty. In these cases, the senior faculty do not mentor junior faculty members in their research expertise area, because it is the junior person who is the authority. However, the senior faculty can and do mentor, or advise, the junior person regarding where to look for research funding, where to submit papers for publication, how to get tenured in their college, etc. He also said that no administrator could just tell him or other senior faculty to mentor and it would happen. He thought edicts from above were counter productive. He said that junior faculty who came to him for mentoring had to convince him of their commitment, otherwise, he thought he would be wasting his time if he mentored someone who wasn't committed.

A white male associate dean at another university said he had been mentored as a graduate student by a professor who was consistently supportive, and suggested topics for research, and possibilities for funding and publication. Although this professor had not been his major professor, the professor was instrumental in showing how to be successful, and this experience had strengthened his self-confidence and resolve. This associate dean thought mentoring was important to accomplishing diversity in his college. He saw mentoring as something senior faculty do to introduce junior faculty to the college environment, to show them how it works and encourage them so they can succeed and advance in their academic careers.

He thought that both university and college level mandates for senior faculty to mentor junior faculty could be effective with information, training, and an agreed upon mentoring plan which the faculty mentors have helped to develop.

Mentoring Roadblocks

The dean of an academic discipline which has traditionally been white and male reports that he and his faculty have some concerns about mentoring. His faculty say they are concerned with sex or race discrimination charges if they do not mentor women and minorities, and if they do, and for some reason it doesn't work out. Also, the whole issue of sexual harassment has them worried. It seems to have evolved, in practice, into "the male is presumed to be guilty." Most university policies and procedures are rigidly adhered to, little is done to protect the charged, and before misunderstandings or facts can be sorted out, a distinguished career, reputation, or life, can be devastated. The legal risks just seem to be overwhelmingly prohibitive to individual male faculty members. Faculty efforts to offer and provide mentoring could be misinterpreted, and "they are afraid to risk it." This context of fear inhibits male mentoring of women and minorities.

This dean says that getting his faculty to see mentoring as an opportunity is problematic. Men faculty who successfully mentor women are often the subject of negative gossip within his college. "People assume that there must be something going on between them when they spend time together." There is no visible or universally accepted structure to mentoring such that it can be easily recognized or evaluated. Students and junior faculty members may not be self-confident enough to ask for mentoring, or to recognize what it is when it is being offered.

Farrell (1993) reports that a majority two thirds of the women he has questioned say they married a man they met at, or through, the work place. Most of these women said they married men who were above them at work. Farrell's concern in connection with this is how the legal climate has changed. Women and men do meet each other and form relationships in the work place. If it works out between them, it is a courtship. Now, however, a male interaction with a woman below him at work can be legally defined as sexual harassment when it does not work out. Similarly, senior faculty may be justifiably concerned that an unintentional lack of awareness or sensitivity on their part due to their ignorance of the culture of minority people could be interpreted as racist. These fears can stop white male senior faculty from mentoring other sex or other race junior faculty.

Corporate America, and state and federal agencies, in order to minimize the incidence and/or complaints of harassment, have developed mentoring policies and procedures as guidelines for their employees. These organizations consider mentoring to be sufficiently important to their competitiveness and operation to warrant its continuation in spite of the potentially threatening current legal environment. A senior male/junior female or minority relationship in higher education can be just as business-like as those associations which have worked in corporations and government. In legitimate mentoring programs, men and women and minorities who are in

association can find comfort and be more confident about following the advice and guidelines which have proven effective in other comparable working situations.

Higher education need not re-invent the wheel when it comes to mentoring policies and procedures. Much valuable information can be gleaned from corporate and government successes. For example, Westoff (1985) suggests that mentors in business situations should not discuss personal matters or give personal advice, should always keep the office door open during conferences, should attempt to find a workable combination of objectivity and friendliness, should avoid letting the association evolve into a father/daughter relationship or one characterized by the undue deference of the mentored individual, should not compromise personal values for a superficial relationship, and should dissolve the association at the first sign of personal attraction. There are also suggestions for junior individuals who are entering into a professional relationship with a senior male mentor. These include that the junior person be more assertive and less deferential in establishing, developing, and sustaining the association with a mentor.

With these concerns about potential pitfalls, white male faculty might be understandably reluctant to provide mentoring to women and minorities. However, during both the 1993 and 1994 American Educational Research Association (AERA) meetings, women in women's special interest group meetings said it seemed that they were being mentored more by men than by women on their campuses. The question these women asked was, "Why aren't women mentoring me?" It seemed that after a woman made it up through the ranks in their higher education institution, she was held up as a role model, but she wasn't helping other women and minorities who hadn't made it yet. There were no responses from the speakers (or panels) when this issue was raised at AERA. The lack of response to these questions left audience participants with the impression that successful women who don't mentor are being selfish and uncaring. The too frequently unanswered question is, "Why isn't SHE mentoring me?"

Women (not) Mentoring

Junior faculty and professional women are publicly complaining that they are not being mentored by senior faculty and administrative women in higher education. They perceive this as women betraying women, women acting like part of the hierarchical bureaucracy, women acting like men instead of helping to build community. They are wondering why women must continue to rely on men for sponsorship.

This complaint causes concern and rifts in the community of women scholars. Minority faculty may have similar concerns, and some of the discussion here may apply to minorities as well, but it will be addressed specifically for women, because it has been women who have raised the issue at AERA meetings. Some of the points which follow are speculative. Some research findings are also referenced. And this brief discussion certainly is not exhaustive, as there are probably as many thoughtful responses to this concern as there are women in higher education.

Starting with demographics, there are so few senior women faculty and administrators, and so many women students and junior faculty, that female mentoring of females is numerically problematic. In 1992, women held less than 25% of all full-time tenured faculty positions in the U.S. (National Research Council). Many of these women are working at community colleges, liberal arts colleges, women's colleges, and not at the more prestigious research institutions. According to Farley (1990), the more prestigious the university, the fewer women there are on the faculty of that institution. Additionally, women are more likely to be found in teaching, and less in research. Graduate assistantships and mentoring have more often been associated with research. This under representation of women faculty continues even though women have been a majority of the students in higher education since 1979 (Touchton, 1991).

Women and minorities report feeling that they are less well prepared as academics and researchers (Zuckerman, et al, 1991; Bronstein, et al, 1993), perhaps due to the quality of their undergraduate or graduate training experience. Feeling less qualified, they might be more hesitant about advising others. Women may mentor less because they themselves have not been mentored as much as men (Gainen, 1993), therefore, women are less confident about taking on a role with which they have little experience. Women may also feel less confident in their new faculty roles. In fact, there is some discussion of women as negative role models for other women (Yentsch & Sindermann, 1992), due to their being perceived as overstressed and somewhat bitter in these new roles.

Women who do mentor other women and take up women's causes fear that their work will be devalued and dismissed as outside the mainstream by their white male colleagues (Bronstein, 1993). Working with other women may be perceived as too political and detrimental to career advancement. Women faculty members of the Purdue Women's Caucus in the 1970s and 1980s would not sign their names on letters to the administration until after they were tenured, because they reported being afraid of retaliation from male faculty. Haslett (1994) points out that women in non-traditional work roles are in a double bind. If they act like women, they are not seen as credible because of pervasive stereotypes about women. If they act like men, they are considered too strange to be credible. Kahle (1985) points out how the overvisibility of women in non-traditional areas "...(due to their scarcity) may cause senior persons to avoid choosing a female protegee, whose career may be easily followed and whose success or failure will reflect on them." (p. 218)

Byrne (1993), Tobias (1994), and Haslett (1994) point to the need for a "critical mass" of women (at least 30%) in an academic area before women are accepted, by men and women, as normal within that discipline. Environmental acceptance and support just seem to shift once this critical mass threshold has been reached. With women holding less than 25% of all the full-time tenured faculty positions, and even fewer senior administrative positions, critical mass has not yet been achieved in many disciplines and on many campuses, therefore, women are not seen by their peers or their juniors as having as much authority to mentor as their male counterparts. Being human, women may respond to the expectations others have of them, and question their own ability as well.

O'Toole (1991) found that women in higher education reported that their institutions were actually more supportive environments for women when there were fewer women in leadership positions. She speculated that administrators in schools with some token women administrators might think that having women in administration satisfies diversity expectations university-wide, and these perceptions may actually curtail organizational activism and impede the program implementation and policy development which enhance diversity at non-administrative levels in the institution. Additionally, token women in administration are more likely to accept dominant group stereotypes of women (Kanter, 1977) and begin to believe that other women are not as qualified.

A Model

The program description presented here was implemented for high school students, in a university setting. It is similar in many ways to NSF sponsored pre-college recruitment and retention programs conducted nation-wide. This example is an alternative to more traditional and hierarchical top-down efforts, as these have not been working to enhance faculty diversity. In contrast, what is proposed here is the bottom-up implementation of a model which has worked at a lower level with pre-college and undergraduate students. Adaptations of this model are possible for implementation at higher levels, for faculty retention.

A summer program in Knowledge Engineering for Young Scholars (KEYS) was conducted at Louisiana State University (LSU) for two consecutive summers. This NSF funded program identified academically talented students and brought them to the LSU campus for an introduction to the use of computers for problem solving and the identification of decision making pathways in science. Women and minorities were especially recruited for participation. All the students worked with faculty mentors. This mentoring program was initiated by sending out a recruiting announcement to faculty members telling them these academically outstanding students would be working on campus, and that mentors were needed to introduce the students to scientific research at the university. The "carrot" for the scientists was that these very talented students would be assigned to work with the faculty researchers for the summer and would be taught how to develop computer decision making programs for each of the faculty mentors' research areas. The artificial intelligence software packages the students would learn to use gave the students an advanced technical skill which the faculty mentors greatly valued.

When a pool of interested science mentors had been recruited and the students were enrolled in the program, an orientation and knowledge engineering training program began. During the orientation period, the mentors made presentations to the students detailing their interest areas and research programs. After all the mentors had made presentations, the students were allowed to chose the research and the mentor with whom they would work for the summer. The students worked with their chosen faculty for part of each day, individually and with other students, and then they reconvened as a group to be taught and then to work together with buddies, or in teams, to develop their computer decision making programs. Each student developed, documented, and presented a product to the faculty mentor by the end of the program.

These students were "coached" as a group on their responsibility to work with faculty, how to approach faculty to request mentoring, the importance of asking questions and being persistent, the value of having study partners/buddies, and how to use state-of-the-art computer systems for decision making and problem solving in science, and in their personal lives. This skill training made it possible for the students to experience technical competence and self-confidence. It was stressed to the students that they were chosen for participation in the program because they were bright and capable, that they were producing "products" which would be useful to the research at the university, that it was okay to make mistakes and learn from them, and that faculty members were humans, just like them. This group and individual "coaching" of the students was also part of the program mentoring. This component of the mentoring was conducted by the two male KEYS program directors, one white and one minority, who were also faculty members, in two different academic departments. Thus, the students were being mentored by a total of at least three faculty members, who were all in different academic departments.

In a follow-up evaluation of the program (Nye, 1991), student participants (who were then enrolled in college) were queried to see what influence the program and the mentoring aspect of the program had on their education and career plans. The students, who were mostly women and minorities, felt very positive about their experience. They reported a high level of self-confidence with computers, and with their own ability to talk to and work with university faculty. Mentors who were assessed as having done a good job were patient enough to explain things, and they spent time to work with the students. There were also some faculty mentors who did not spend enough time with the students. However, the students reported that the LSU KEYS program had given them a better understanding and appreciation of scientific research and college life. They reported an increased interest in graduate school, and they were optimistic about their own future as scientists. The students said that getting to work on real research had been a highlight of their experience, and the interactions with professors were real confidence boosters for them.

There are aspects of this pre-college level mentoring program which worked and could be adapted for use within a university community of scholars. The organized recruitment of faculty to serve as mentors provides a legitimacy to the role, and provides a more formal program within which senior faculty can provide, and junior faculty can take advantage of, mentoring. Graduate students are expected to find their major professors and doctoral committee members from among those who instruct their classes, or from those who have similar research interests to their own. This is a common model. So too, junior faculty are expected to identify research colleagues when they meet and talk to each departmental faculty member during the pre-employment interview process. However, just as with the LSU KEYS program, some faculty are willing to spend the time to assure the success of the mentoring process, and some are not. Therefore, participation of senior faculty in any mentoring program needs to be optional, not obligatory. Carrots/rewards will provide better incentive than sticks/penalties.

By providing a program for faculty mentoring, with guidelines, but without cumbersome specifications, faculty participation can be encouraged without inhibiting freedom of interpretation by the individuals involved. With a mentoring program in place, participants can get to know each other over a specified time period, like the junior faculty's first semester or year on campus,

or until tenured. As with the KEYS program, newcomers can be given orientation together, as a group, and allowed to hear the presentations of a series of participating mentors. Junior faculty can then be allowed to chose among them, and have it be a mutually agreeable arrangement for a fixed period of time, after which it can be dissolved or renegotiated between the participants. Boice (1990), and Wunsch & Johnsrud (1992), report that both new faculty and senior faculty have high levels of satisfaction from their participation in organized campus mentoring programs.

Ideally, a mentoring program could be established at the departmental level, where it could be routinely monitored by the department chair. For departments which are too small, this could be done at the college level, under the auspices of the dean. And for colleges which are too small, this could be accomplished at a combined college level, or even at a full university level. For new faculty, the benefits include a support group of their peers, the opportunity to work with senior researchers, and potentially to enhance self-confidence, commitment, and comfort level in working with faculty, just as the LSU KEYS students did.

For faculty mentors, the potential benefits include an increase in the number and strength of faculty in their interest area, more opportunities for collaboration in research and publication, more peers to share the teaching load and advise students, and with diversity, more creative approaches to interest group, departmental, college, and university problem solving. Also, as noted previously, with success will also come reduced turn-over costs and significant human and financial resources savings, economies which can be re-directed to more productive uses.

Junior faculty, who may have recently completed graduate school, might be resistant to being assigned what may appear to be another "committee" experience. They probably prefer to see themselves as professionals who have graduated from the overview committee stage of their careers. Therefore, it would be advantageous to require new faculty to identify "senior faculty role model/mentors" to be their advisors. This title for advisors distinguishes them from a committee for the new faculty, and the "senior faculty role model/mentor" designation may have the additional advantage of making participation more attractive to senior faculty.

Each new faculty member could be required to identify 3 senior faculty role models and mentors, one within the department, one within the college, and one outside of the college. An appropriate form could be completed by the new faculty, signed by each senior faculty who agrees to be a mentor, and returned to the department head, to be signed and discussed, with copies distributed to all signatories for future reference, especially each year when the department chair reviews the new faculty member, to find out what is working and what is not working. At least annually, the department chair and junior faculty can review the mix of mentors for suitability to see if adjustments are needed, -for personal or professional growth, if something isn't working, or if the participants have concerns about the nature of the relationship. The department chair could encourage the junior faculty member to take responsibility for making the contacts necessary to keep the mentoring process on-track.

Part of the model could be that the new faculty and their mentors agree to meet one-on-one at least twice each semester until tenure is achieved. Twice per semester with each of three

advisors would average out to at least one meeting per month. This regular contact builds community within the department, college, and university. This regularity of "mentoring" will also make new faculty members feel supported and connected to a community of other faculty. The importance of having some mechanism within the program so each new faculty member has identifiable mentors is discussed later in this paper.

Mentoring Activities

For this study, white and minority women faculty members from different universities were asked to identify people who were helpful to their career advancement. Their responses included the following comments regarding what people who were helpful to them had done:

> advised, counseled, instructed, were supportive, believed in them, encouraged, respected them, were an advocate for them, met and talked with them, were willing to listen, set examples, nominated and promoted them, wrote glowing letters of recommendation, built their confidence, made it okay to make mistakes or even to fail and learn from it, involved them in proposals, grants, papers and publication, helped them to grow, helped develop their skills and taught them new skills, made sure they were involved in meetings and met people important to their work, set standards, parented, were friends, offered to help, presented projects in manageable pieces instead of as big overwhelming jobs, allowed them to work independently, were good editors, complimented them on their work, helped to get them promoted, taught them research and professional skills, gave honest and friendly feedback on their work, brain-stormed with them, modeled successful professional behavior, showed them how to relate effectively with colleagues, told them what did and didn't work, got them involved in support groups, encouraged them to develop their interests and try new things, gave them release time to write, discussed issues with them, monitored their progress, suggested new things to try, gave them emotional support, welcomed them when they first arrived, often came to their office, invited them to lunch or dinner, pushed their thinking, shared work in process with them, helped them to make contacts, created opportunities for them and pointed out where to go next, helped them to work through personal and professional decisions, checked to see how they were doing, explained the tenure process in detail, were thoughtful and caring, the door was always open to them, helped them negotiate the political waters, told them who to avoid, actively intervened on their behalf to head off potential problems, accepted them.

A more concise listing of helpful mentor duties was developed specifically for science by Yentsch & Sindermann (1992):

- demonstrate a style and methodology of doing research
- develop an analytical approach to selection of significant questions and to choosing appropriate approaches to solving them

- discuss concepts in any subdiscipline, and the evolution of those concepts over time
- explore and evaluate the literature of the discipline and the broader body of knowledge of which it is a part
- discuss the ethical basis for scientific research
- consider, analyze, and evaluate the work and conclusions of colleagues
- transmit, by example and discussions, the skills required for scientific writing
- evaluate successful teaching techniques
- facilitate access to the research community in the discipline (scientific societies, peer groups, international science, "in groups," etc.)
- illustrate the methodology and significance of "networking" in science
- develop attitudes and approaches to the many interpersonal relationships involved in being a scientist (pp. 147-148)

If no appropriate group already exists on campus, an ad hoc committee or the faculty senate could prepare senior faculty mentoring guidelines similar to these which individual departments could adapt for their use. Each department could develop a corresponding list of responsibilities for junior faculty to ensure that the mentoring process is appropriate to their discipline. Using the Yentsch & Sindermann listing for mentors' responsibilities as an example, a corresponding list of junior faculty responsibilities in the mentoring process might read as follows:

- request recommendations on how to develop a style and methodology for doing research
- request recommendations on how to develop an analytical approach to selection of significant questions and to choosing appropriate approaches to solving them
- participate in discussing concepts in any subdiscipline, and the evolution of those concepts over time
- explore and evaluate the literature of the discipline...(etc.)
- take responsibility for making the contacts necessary to keep the mentoring process going, so it will be a worthwhile experience for you and your mentor(s)
- (other expectations/responsibilities the department specifies)

During the new faculty orientation process, the mentoring program, and mentor and junior faculty responsibility expectations could be explained and discussed, either within the department, the college, or in some university-wide forum.

Reality Check

Most of the white and minority women interviewed for this study said they have not had a mentor in their faculty career. One black woman faculty said a mentor is:

> Someone who takes you under their wing and shows you how to get published, find the right journals, spends regular and consistent time with you, listens, calls you at home and asks you how it is going, invites you to attend conferences,

> invites you to go to lunch and dinner, is a good editor, reads your work and tells you what works and where it should be different, pulls you aside and advises you, shares opinions and history, and helps you to construct yourself as a faculty. I haven't had this. I piece me together from bits and pieces. I went to them and asked for it. They didn't give it.

This woman was asked to respond to the department head's comment (from another university, see p. 11) that junior faculty who came to him for mentoring had to convince him of their commitment, otherwise, he thought he would be wasting his time. Her response:

> To expect junior faculty to ask senior faculty for mentoring is to ignore the power differential. That's a hard barrier to overcome. Those expectations are unrealistic for me. The administrators here try to be supportive and friendly, but the senior faculty here don't talk to me. I don't ask the administrators to go to lunch because I know they are too busy. I see them go to lunch with the guys (male faculty), but not me.

At the time of the interview, this woman's college was hosting a series of diversity seminars, several of which were sponsored by her department chair. It was obvious that her college administrators were aware, or attempting to become more aware. Although the time, energy, and resources spent on these seminars to advance diversity concepts may be of great educational value to the majority white faculty, they were obviously doing little to make this black woman feel mentored. A less formal contact, like being asked to go to lunch or offering to edit her papers occasionally, would have taken much less time, energy, and resources than the diversity seminar series, and probably would produce better personal results for this woman.

Repeatedly these white and minority women faculty reported that they arrived on campus unwelcomed, nobody seemed to know or care that they had arrived. They didn't know what to expect regarding how to be a faculty member, and nobody seemed to care. They believe mentoring exists, because they see it going on between males. They see men faculty as the ones who are given opportunities and privileges, encouraged, etc., but they say the women (they) are not being mentored. However, with encouragement, and upon reflection, each woman interviewed was able to identify individuals who have been helpful to her career advancement since she had become a faculty member. A synopsis of what these helpful people did was given on page 18.

It is possible that women expect mentoring to look like the entire list of helpful activities enumerated on page 18, or even the entire list of mentor activities given by the black woman faculty (p. 19-20). Both lists seem overwhelming, requiring super-human capabilities. Perhaps this is part of the problem associated with the concept of mentoring for women and minorities. Their expectation may be that mentoring comes to you (so you don't go and ask for it), or that mentoring has to come from someone of your sex and race (so white men can't do it), or that it has to include the whole list on page 18 or 19 for it to actually be mentoring (so individual acts, though helpful, don't get recognized as mentoring). Though these women were able to identify people who had done helpful things, they did not think they had been mentored.

Earlier in this paper, a model was presented which proposed a formal mentoring program, and three senior role model mentors (departmental, college, and non-college) for each new faculty. Each new faculty would participate in the mentoring program until tenured, and the department chair would monitor the progress of each new faculty. There would be a required number of meetings with each mentor, each semester, to ensure at least minimal contact and mentoring takes place. This plan would provide new faculty with recognizable mentoring, and constructively involve them in a community of caring scholars within and outside their colleges. There would be no doubts, no question regarding whether or not they were being mentored. If the associations weren't helpful, they could be adjusted or revised as needed. Administrative sponsorship of such a concept is imperative, and allowing newly tenured faculty to nominate the best mentors for prestigious awards would send a strong message to senior and junior faculty that mentoring, diversity, and community are valued by the university.

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